

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A pair of primers ~~with forward primer~~ consisting of a forward and a reverse primer wherein the forward primer consists of SEQ ID NO. 1 having sequence of CCAAGCTTGCTGAACGCATCGG, and the reverse primer consists of SEQ ID NO. 2 having sequence of CCAAGCTTGCCACGCAGGATTATC.
2. (currently amended): A method for identifying *Artemisia annua* plants that contain at least 0.4 w/w/% artemisinin, comprising
obtaining DNA from said *Artemisia annua* plant
amplifying said DNA by polymerase chain reaction using the pair of primers of claim 1
identifying *Artemisia annua* plants containing at least 0.4 w/w/% artemisinin ~~pair of primers as claimed in claim 1, wherein the primers help identify plants *Artemisia annua* containing high content of artemisinin.~~
3. (withdrawn-currently amended): A ~~screening~~ method for increasing the yield of artemisinin production in progeny *Artemisia annua* plants ~~early identification of plants *Artemisia annua* having high content of artemisinin and thereby helping generation of plant population with further high content of artemisinin,~~ said method comprising the steps of:
 - a. ~~isolating~~ obtaining DNA from *Artemisia annua* plants ~~the plant,~~
 - b. amplifying said DNA by polymerase chain reaction using the pair of primers of claim 1 ~~running PCR on the isolated DNA using a pair of primers of SEQ ID Nos. 1 and 2,~~

- c. identifying *Artemisia annua* plants containing at least 0.4 w/w/% artemisinin~~identifying plants having high content of artemisinin, containing nucleotide SEQ ID No. 3, and~~
- d. crossing *Artemisia annua* plants containing at least 0.4 w/w/% artemisinin
the identified plants to produce *Artemisia annua* progeny plants the next
generation plants with containing a further higher content percentage of artemisinin than
either *Artemisia annua* parent plant.
4. (withdrawn-currently amended): ~~A screening~~The method as claimed inof claim 3,
wherein said *Artemisia annua* plants containing at least 0.4 w/w/% artemisinin~~the plants can be~~
~~be identified at nursery-stage-itself.~~
5. ~~—(withdrawn): A screening method as claimed in claim 3, wherein the high content~~
~~refers to~~
~~concentration of 0.4 w/w/% or more.~~
6. (withdrawn-currently amended): ~~A screening~~The method of as claimed inclaim
3, wherein *Artemisia annua* progeny plants containing the plant with higher content of
artemisinin ranging between 0.5 to 1.4 w/w/% are produced~~artemisinin are produced.~~
7. (withdrawn-currently amended): ~~A screening~~The method as claimed inof claim 3,
wherein ~~the an~~an increase in the artemisinin genetic advance (GA) ~~is of~~is about 0.4 w/w % occurs in
first~~within~~ four years.
8. (withdrawn-currently amended): ~~A screening~~The method as claimed inof claim 3,
wherein ~~the~~ artemisinin content heritability (h) is about 80.

9. (withdrawn-currently amended): ~~A screening~~A method as ~~claimed in claim 3,~~
~~wherein the method helps~~for maintaining an elite genotypic population of *Artemisia annua*
plants containing at least 0.4 w/w/% artemisinin, consisting essentially of the steps of claim 3.